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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,444	01/05/2001	Olivier Hericourt	FR919990082US1	5121

25259 7590 01/25/2005

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EXAMINER

NGUYEN, HAI V

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,444

Applicant(s)

HERICOURT, OLIVIER

Examiner

Hai V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to the communication received on 15 September 2004.

2. Claims 1-11 are presented for examination.

Response to Arguments

3. Applicant's arguments filed 15 September 2004 have been fully considered but they are not deemed to be persuasive.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by

Colby et al. US patent no. 6,449,647 B1.

6. As to claim 1, Colby, Content Aware Switching Of Network Packets, substantially teaches the invention as claimed, including a method for accessing information in an intranet through a firewall, said method comprising the steps of:

in a socks dispatcher:

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- retrieving the value of a Type Of Service (TOS) field from the IP header of the IP datagram that includes socks traffic on a sock server, in an Internet Protocol (IP) intranet network having plurality of socks servers (*Colby, col. 2, lines 42-51*); and

- selecting a socks server (*best-fit/candidate server*) solely on the basis of the retrieved TOS value (*Colby, col. 3, lines 16-20; col. 2, lines 20-28*).

7. As to claim 2, Colby discloses wherein the selecting step includes assigning a priority to the IP datagram based on solely the retrieved TOS value (*Colby, col. 2, lines 12-20; col. 3, lines 20-28*).

8. As to claim 3, Colby discloses, wherein the selecting step uses the priority based on solely the retrieved TOS value to select the socks server (*Colby, col. 2, lines 12-20; col. 3, lines 20-28*).

9. As to claim 5, Colby discloses wherein the selection step refers to a first table for each sock server, each record in the first table having: an identifier, preferably an address, one or a plurality of TOS field values, optionally, a sock server capacity, optionally, application level protocols supported by the socks server (*Colby, col. 2, lines 14-51; col. 2, line 54 – col. 4, line 4; col. 9, line 5 – col. 10, line 59; col. 10, line 60 – col. 11, line 67; col. 12, line 59 – col. 13, line 19*).

10. As to claim 6, Colby discloses steps of: • configuring the first table, configuring a second table for assigning the priority to the IP datagram based solely on the retrieved TOS value, the second table having a priority and an application level protocol for each TOS value, defining a default socks server for values of the Type Of Service (TOS) field not defined in the first table, and

defining a default priority and optionally a default application level protocol for values of the Type Of Service (TOS) field not defined in the second table (*Colby*, col. 2, lines 14-51; col. 2, line 54 – col. 4, line 4; col. 9, line 5 – col. 10, line 59; col. 10, line 60 – col. 11, line 67; col. 12, line 59 – col. 13, line 19).

11. As to claim 7, *Colby* teaches wherein the step of selecting a socks server refers to a first table, said first table defining for each value of the Type Of Service (TOS) field one or a plurality of socks servers, comprising the further steps of:

- determining the number of socks servers defined for the value of the Type Of Service (TOS) field retrieved from the IP datagram:

- if only one socks server is defined in the first table, forwarding the IP datagram to said socks server, and

- if more than one socks server is defined in the first table, forwarding the IP datagram to a socks server selected according to its capacity and the priority of the IP datagram (*Colby*, col. 2, lines 14-51; col. 2, line 54 – col. 4, line 4; col. 9, line 5 – col. 10, line 59; col. 10, line 60 – col. 11, line 67; col. 12, line 59 – col. 13, line 19).

12. Claim 8 is corresponding apparatus claim of claim 1; therefore, it is rejected under the same rationale as in claim 1.

13. As to claim 9, *Colby* discloses further comprising an IP network device wherein said IP datagram is sent by said IP network device with a given priority, and wherein said retrieving step is followed step of:

determining the priority of the IP datagram by referring to a second table (*QoS category*), said second table defining a priority for each value of the Type Of Service

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(TOS) field (*Colby*, col. 2, lines 14-51; col. 2, line 54 – col. 4, line 4; col. 9, line 5 – col. 10, line 59; col. 10, line 60 – col. 11, line 67; col. 12, line 59 – col. 13, line 19).

14. Claim 10 is corresponding computer readable medium claim of claim 1; therefore, it is rejected under the same rationale as in claim 1.

15. Claim 11 is similar limitation of claim 9; therefore, it is rejected under the same rationale as in claim 9.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Colby* as applied to claims 1-3 above, and further in view of **Chapman** US patent no. **6,304,552**

B1.

18. As to claim 4, *Colby* does not explicitly discarding IP datagrams having the lowest priority.

In the same field of endeavor, *Chapman*, Memory And Apparatus For Input Based Control Of Discards In a Lossy Packet Network, discloses in Fig. 9, item 912 that discarding all LO packets arriving at queue (*Fig. 9, item 912, col. 12, line 62 – col. 10, line 48*).

Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated *Chapman's* teachings of

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discarding low priority packets (*Fig. 9, item 912, col. 12, line 62 – col. 10, line 48*) with the teachings of Colby, for the purpose of *improving the management of IP-layer bandwidth allocation and packet discard within a lossy data communication network arrangement and more controlling the data units transport and discard process in a switch (Chapman, col. 2, lines 42-67).*

Response to Arguments

19. Applicant's arguments filed 15 September 2004 have been fully considered but they are not deemed to be persuasive.

20. In the remark, Applicant argued in substance that:

Point (A), the prior art does not disclose that, "*an Internet Protocol (IP) intranet network having a plurality of socks servers*" in claim 1.

As to point (A), Colby discloses that, "*A virtual web host has one or more public virtual IP address that clients use to access content on the virtual web host. A web host is uniquely identified by its public IP address. When a content request is made to the virtual web host's virtual IP address, the virtual IP address is mapped to a private IP address, which points either to a physical server or to a software application identified by both a private IP address and a layer 4 port number that is allocated to the application.* (Colby, col. 2, lines 42-51). It is clearly well known to an ordinary skill in the networking arts that the IP intranet network is nothing more than the private IP network having a plurality of servers each having IP address and its port number.

Point (B), the prior art does not disclose that, "*selecting a socks server solely on the basis of the retrieved TOS value*" in claim 1, 8, and 10.

As to point (B), Colby discloses that, *"a method for selecting a best-fit server, from among a plurality of servers, to service a client request for content in an IP network. (Colby, col. 3, lines 16-20)"* and *"A flow classification technique may, for example, classify flows based on IP addresses and other inner protocol header fields. For example, a QoS class with a particular priority may consist of all flows that are destined for destination IP address 142.192.7.7 and TCP port number 80 and TOS of 1 (Type of Service field in the IP header). This technique can be used to improve QoS by giving higher priority flows better treatment (Colby, col. 2, lines 20-28).* Colby also discloses that, *"The server is chosen by the flow switch based on the type of content requested, the QoS requirements implied by the content request, the degree of load on available servers, network congestion information, and the proximity of the client to available servers. The entire process of server selection is transparent to the client. (Colby, col. 2, lines 59-64).*

Point (C), the prior art does not *"discarding the lowest priority IP datagrams that are currently in the output queues"* in claim 4.

As to point (C), Chapman discloses that, *"In a specific example, assume that a data packet arrives at the transport node. The packet is then queued by source (entry point in the transport fabric). If the source address does not correspond to a queue already set up, a new queue is dynamically created. Queue congestion is next checked for. If the queue fill is below a threshold setting, all packets arriving for that queue will be accepted. If the queue fill is above the threshold, packets are dropped. The packets discarding is preferably effected on the basis of their priority. For instance, the priority of*

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the packets is examined (the example assumes two possible priority settings, namely HI and LO identified by bit in a particular field of the packet frame). Packets having a setting of LO are discarded, while packets having a priority of HI are kept. (Chapman, col. 4, lines 26-40). It is clearly that the LO priority packets is currently queued by source node and are discarded.

21. Further references of interest are cited on Form PTO-892, which is an attachment to this action.

Conclusion

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

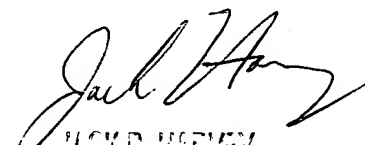
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai V. Nguyen whose telephone number is 571-272-3901. The examiner can normally be reached on 6:00-3:30 Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on 571-272-3896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hai V. Nguyen
Examiner
Art Unit 2142



JACK D. HARVEY
SUPERVISOR, PATENT EXAMINER